

**Buy SUMMARY OF THE PhD THESIS**

**AN EMPIRICAL STUDY OF LOCAL FOOD-RELATED CONSUMER  
ATTITUDES**

Dr Dorka T. Nagy-Pető

Supervisor:

Dr Zoltán Szakály

University Professor



**UNIVERSITY OF DEBRECEN**

**Doctoral School of Management and Business**

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# 1. BACKGROUND RESEARCH, OBJECTIVES AND THE PRESENTATION OF RESEARCH HYPOTHESES

The choice of topic dates back to 2016 when I started my research on local products in preparation for 'Complex rural economic development and sustainability research, development of the service network in the Carpathian Basin' with my supervisor and fellow researchers. The research also included the preparation of my doctoral research, and I continued to work with the members of the research team.

Several studies in the international literature report growing consumer dissatisfaction with food from industrial production systems. Their concern for their health and that of the environment, as well as their desire to support local producers, has led them to seek other alternatives, such as local, traditional, or regional products. In most countries, these are foods with geographical indications (FERNÁNDEZ-FERRIN et al., 2019).

In addition, globalisation has led to an increasing internationalisation of the food market, which has also significantly increased food miles (i.e. the distance travelled from the origin of food to the final consumer) (TVE, 2007) (MEYERDING et al. (TVE, 2007) (MEYERDING et al. 2019). It has led to concerns about the vulnerability of local economies to international markets (price competition) on the one hand and increased consumer concerns, focusing on fears about transparency in supply chains, food safety, environmental protection or other issues related to food scandals on the other hand in recent years (HOLT and AMELIEN 2007, TRIENEKENS et al. 2012, AUNG és CHANG 2014, MEYERDING et al. 2019; T. NAGY-PETŐ et al., 2023a).

Increased development and support of local economies offer a solution to the above. Local economic development is difficult to define, but it is generally considered a goal of *conscious intervention in local processes to reduce territorial disadvantages and develop and strengthen* the local economy with the lowest risk (BAJMÓCZY, 2011; IVÁNYOS and SÁNDORNÉ, 2015; HOFFMANN et al., 2016:52). In other words, a sustainable social model that helps to create and maintain a fair standard of living for the local community by strengthening the economy. The public sector, non-state actors and businesses also have an essential role to play in this economic recovery and job creation (SWINBURN et al., 2004, cited in HOFFMANN et al., 2016). The initiators of these processes can come not only from within the local community but also from outside, as long as they take into account local

interests (cultural, social and economic) in the short and long term. It can also be a kind of CSR (Corporate Social Responsibility) activity on their part.

Local products and short supply chains in the focus of our research play a significant role in the national economy and in creating a sustainable economy and society. Our research has explored consumer attitudes using models relating to the consumption of local products.

In the scientific literature, the meaning of 'local food' varies according to the authors and the research context. At the international level, the concept of local products or local food in the strict sense is very broad, with complementary and parallel dimensions (T. NAGY-PETŐ et al., 2023). Local food systems can generally be associated with three domains of proximity: geographical proximity (e.g. physical locality, distance between food production and consumption), relational or social proximity (e.g. close links between food system actors) and proximity of values (e.g. origin, traceability, freshness, quality) (ERIKSEN, 2013; ENTHOVEN és VAN DEN BROECK, 2021). The basic thesis of HOLT and AMILIEN (2007) also focuses on "place specificity", but they mention historical, cultural and social aspects in addition to geographical distance. Typically, geographical proximity is the basis for the definition of SFSC (short food supply chains), while other dimensions of proximity, as we have seen, may cover other characteristics. The emergence of a folkloristic or ethnocentric consumer trend has also justified the emergence of short food supply chains as a central idea, and the definition of local products has therefore become more precise (HOLT and AMILIEN, 2007; T. NAGY-PETŐ et al., 2023a).

Several branches of science, such as rural development, systems management, ethnographic research, or other branches of the social sciences, investigate the issue, and approaches vary widely from country to country (HOLT and AMILIEN, 2007; T. NAGY-PETŐ et al., 20-23a). In the case of national research, the topic of local products is typically found in research on rural development, marketing, or agricultural sciences, with rare multidisciplinary interest in the social sciences (HOFFMANN et al., 2016).

The concept of a local product is not subject to strict rules, but its main characteristic is that it is sold in short supply chains (PETERS et al., 2008; BRIAN, 2012; GRANVIK et al., 2017; NAK, 2016). Local products and short supply chains have also become essential keywords in international studies on sustainable food supply chains (MORGAN, 2010;

GRANVIK, 2012; GARNETT, 2014; BALDY, 2017, KOTLER, 2020; BARSKA and WOJCIECHOWSKY-SOLIS, 2020; T. NAGY-PETŐ et al., 2023b).

It is also important to emphasise that the role of the market, the classical playing field of producers' sales, has changed in recent years. It has been brought about by the transformation of retail structures and supply chains and the continuous evolution of lifestyles (AGUGLIA et al., 2009; SZABÓ and JUHÁSZ, 2012). AGUGLIA et al. (2009) also highlight that women's changing roles - from homemakers to workers - have led to increased behavioural change in food purchasing (SZABÓ and JUHÁSZ, 2012). Therefore, it is vital to examine the role and popularity of this community and shopping location among the domestic population.

Hypotheses:

*1a: Consumers' minds were also dominated by factors defined by the previous law before the coronavirus outbreak, i.e., the use of the traditional process or the Hungarian property and labour.*

*1b: Knowledge of the origin of local products was incomplete and inaccurate before the coronavirus outbreak.*

*2a: Buyers of local products also consider ATL-type (Above The Line) information when seeking information about local products, but the primary source of information is the immediate social environment.*

*2b: In local communities, the demographic characteristics of the group that spends most on local products are similar to those of the conscious consumer group.*

*3a: Farmers' markets are clearly the most popular among short food supply chains.*

*3b: Consumers are most likely to buy fruit, vegetables and eggs regularly at farmers' markets.*

*4: There have been major changes in their local product awareness after the coronavirus outbreak.*

*5a: Regarding local products, Hungarians agree mainly with rational reasons, while individual emotions are the least important factor in purchasing decisions.*

*5b: According to the model of Megicks et al. (2012), different groups can be formed along each dimension.*

*5c: The local food preference model of Megicks et al. (2012) yields the same results in a Hungarian sample today.*

*5d: The main reasons for non-purchase are the perceived high price and the assumption that the expected effort is too high.*

*6a The CETSCALE model will continue to produce distinct groups that are consistent with the literature.*

*6b: Nationalist and patriotic groups will be better informed about local product rules than cosmopolitans.*

*6c: Consumers with more extreme nationalist sentiments prefer local food significantly more than other groups.*

## **2. INTRODUCTION OF THE DATABASE AND THE APPLIED METHODOLOGY**

The research involved both secondary and primary research.

### **2.1. Presentation of secondary research**

My secondary research included more than 200 references to published literature. The selection was based on three criteria: firstly, the most critical primary literature on the research area should be published at national and international levels since many aspects of the topic have been the subject of research for several decades, and many of the models are still perfectly valid (e.g. cultural effects on consumer behaviour or ethnocentrism); secondly, timeliness was important, so we attempted to find the most recent quality information in each of them and add it to the relevant chapter. Thirdly, it was necessary to include alternative trends and possibilities that are less studied and known, such as the hyperlocal movement or aspects of local product channel policy.

On this basis, both at the level of textbooks and journals, the basic models and paradigms of consumer behaviour and ethnocentrism were examined, and the conceptual framework, legal aspects, consumer trends and marketing opportunities of local products were also studied separately using textbooks, journal articles and statistics.

The literature sources were searched primarily in MATARKA and Google Scholar at the national level and in Science Direct for international sources, and then relevant research was found along with citations in the sources. Statistical data were explored both in international statistical databases and Statista, which collects more data on consumer behaviour but is relatively new. Domestic trends were monitored using the following KSH (Central Statistical Office), NAK (Hungarian Chamber of Agriculture) and other databases.

### **2.2. Presentation of primary research**

In order to explore the correlations between the topics under study, we conducted a nationally representative (gender, age, region) consumer questionnaire survey of 500 respondents in 2019, which was repeated in 2021 with a nationally representative sample of 1000 respondents by gender, age, region and, in 2021, by place of residence (**Table 1.**). The fieldwork was carried out by Szocio-Gráf Market Research Institute.

In both samples, the 'random walking' principle was applied in each region and in the selected municipalities, which ensured complete randomness in the selection of suitable respondents. The so-called 'birthday key' was used to select the right person to be interviewed from among those living in the household visited. This method was also used to ensure complete randomness in the second step. The data were collected using a standard questionnaire in face-to-face interviews at the respondents' homes, with the interviewer giving the selected person a set of cards containing the possible answers to each question. The answers given by the respondents were recorded on the interviewer's questionnaire. The data were collected through personal interviews using a standardised omnibus questionnaire (T. NAGY-PETŐ et al., 2022 and 2023a).

**Table 1. Presentation of samples – 2019 (N=500) and 2021 (N=1000)**

Variables		Presentation of samples				Distribution of population <sup>1</sup>
		2019		2021		
		Person	%	Person	%	%
Gender	Male	235	47.00	471	47.10	47.80
	Female	265	53.00	529	52.90	52.20
Age group	16–29 years	96	19.20	172	17.20	18.30
	30–39 years	83	16.60	161	16.05	16.00
	40–49 years	93	18.50	196	19.56	19.60
	50–59 years	73	14.70	151	15.12	15.10
	above 60 years	155	31.00	321	32.07	31.00
Type of residence	Budapest	90.	18.00	184	18.40	17.90
	Town	275	55.00	545	54.50	52.60
	Municipality	135	27.00	271	27.10	29.50
Region	Western Transdanubia	51	10.20	102	10.21	10.10
	Central Transdanubia	54	10.80	109	10.86	10.80
	Southern Transdanubia	46	9.20	91	9.09	9.00
	Northern Hungary	74	14.80	114	11.41	14.80
	Central Hungary	152	30.40	310	30.99	31.00
	Northern Great Plain	58	11.60	147	14.70	11.50
	Southern Great Plain	65	13.00	128	12.78	12.80
Qualifications	Maximum 8 years in primary school	64	12.90	108	10.80	
	Vocational training school, technical school	154	30.70	303	30.30	
	School-leaving examination	202	40.50	417	41.74	
	Tertiary level degree	80	15.90	168	16.80	

Subjective income	They make a very good living and can save money.	35	7.00	86	8.55	
	They can make a living but save only a little money.	175	35.00	397	39.73	
	Just enough to live on, but they cannot save.	241	48.20	438	43.78	
	Sometimes, it's not even enough to make a living.	22	4.40	62	6.18	
	They have regular daily living problem(s).	1	0.20	4	0.44	
	Don't know/No answer	26	5.20	13	1.3	

Source: T. NAGY-PETŐ et al., 2023a. Notes: Based on I – KSH 2019a; 2019b.

### 2.2.1. Methodology of the questionnaire surveys

The same methodology was used for the two questionnaire surveys to examine the underlying results, i.e., responses to nominal questions were plotted using distribution indicators. On the other hand, the mean, the mode and the standard deviation were tabulated for each variable in the scale-type questions. The questionnaire included both 1-5 and 1-7 Likert scale questions. The results always indicated these variations for ease of understanding and interpretation.

Analyses were carried out using cross-tabulations with Pearson's chi-square test. They showed where random and real correlations could be found numerically. Significant correlations between results are presented only on the basis of cross-tabulation analysis ( $p < 0.05$ ).

The different consumer models used were based on the research methodology and were, therefore, different. Most importantly, the reliability indicators and technical criteria for factor, principal component and cluster analyses were met in all cases.

### 3. MAIN FINDINGS OF THE THESIS

This summary thesis highlights only the most important findings of the primary research. These are set out in detail below, highlighting the relevant links.

#### 3.1. Analysis of changes in consumer attitudes and habits based on the 2019 and 2021 consumer surveys

We asked several identical questions in the two surveys. The reason for this was that we wanted to see the change over the two years. The first question in the survey was designed to explore the respondents' expectations of local products. It is demonstrated in **Table 2**.

##### 22. Comparison of local food expectations according to 2021 results in descending order (selected, %)

Response option	Distribution of responses	
	2019	2021
They come from a small geographical distance.	39.6	71.8
Local labour is employed in their processing.	46.8	68.9
They are processed using traditional methods.	51.3	67.8
They are sold in small volumes.	17.7	67.4
A trademark guarantees their local character.	28.9	65.2
The manufacturer is a Hungarian owner.	49.0	63.2

Source: T. NAGY-PETŐ *et al.*, 2023a). Notes: 2019: N=500, 2021: N=1000

While in 2019, processing using traditional methods was the most critical factor for consumers, in 2021, they considered small geographical distances to be essential. It was clear that consumers became more comfortable. The use of local labour was ranked second in both years, meaning that this was a consistently important consumer expectation. It can also be seen that all characteristics (expectations) received higher percentages in 2021 than in 2019. It suggests that local food has become increasingly important to Hungarian consumers, which is reflected in their higher expectations.

In the following, we address the question of how food from a distance is considered local by respondents. The results obtained are demonstrated in **Table 3**.

### 33.: Consumer perception of the origin of local products in 2019 and 2021

Response option	Distribution of responses	
	2019	2021
Only from our own municipality	29,9	9,1
From your own and neighbouring municipalities	7,6	26,0
Only from our county	17,8	26,2
From our region	18,8	21,8
From Hungary	21,5	15,5
Don't know/No answer	4,4	1,4

Source: T. NAGY-PETŐ et al., 2023a). Notes: 2019: N=500, 2021: N=1000

The results suggested that by 2021, consumers were more likely to accept products from a greater distance. There was a clear difference in the perception and acceptance of food from their municipality and a neighbouring municipality. To a lesser extent, this trend also applied to products from the county and region.

An interesting question was how far away, in kilometres, the respondents considered the product to be local. The comparative analysis is shown in **Table 4**.

**Table 4: Consumer perception of the distance of origin of local products in 2019 and 2021 in kilometres (selected, %)**

Distance	Distribution of responses	
	2019	2021
Less than 5 km	14.7	8.1
Within 20 km	32.7	24.6
Within 40 km	19.6	26.8
Within 100 km	11.0	23.0
More than 100km	13.5	14.8
Don't know/No answer	8.5	2.6

Source: T. NAGY-PETŐ et al., 2023a). Notes: 2019: N=500, 2021: N=1000

In the first two distance categories (less than 5 km and within 20 km), the percentage of acceptors decreased significantly in 2021. It meant that products from longer distances were also considered local. It indicated they were more accepting of products from long distances, even more than 100 km. It could be said that in 2021, the concept of local products was interpreted more broadly and flexibly than before. It should also be taken into account by policymakers.

### 3.2. Examination of consumer attitudes towards local products

After analysing the claims of Megicks et al. (2012), an exploratory factor analysis was conducted. During this process, some statements appeared in more than one factor and were, therefore, removed from the analysis. These factors were knowledge of origin, naturalness and reduction of transport distances. The factor analysis separated three reliable (KMO MSA=0.89; Bartlett: Sig:  $p < 0.001$ ; Cronbach's Alpha=0.876) and well-defined dimensions. (**Table 5**). For the first factor, product attributes included nutritional properties, external properties, and environmental friendliness. In the case of the second factor, traditionalism and nostalgia were the main factors, combined with ethics and the pleasure of shopping, thus creating an emotional commitment. The third factor was clearly aimed at strengthening local interests and the local economy, i.e., the primary motivation was to support local producers and traders.

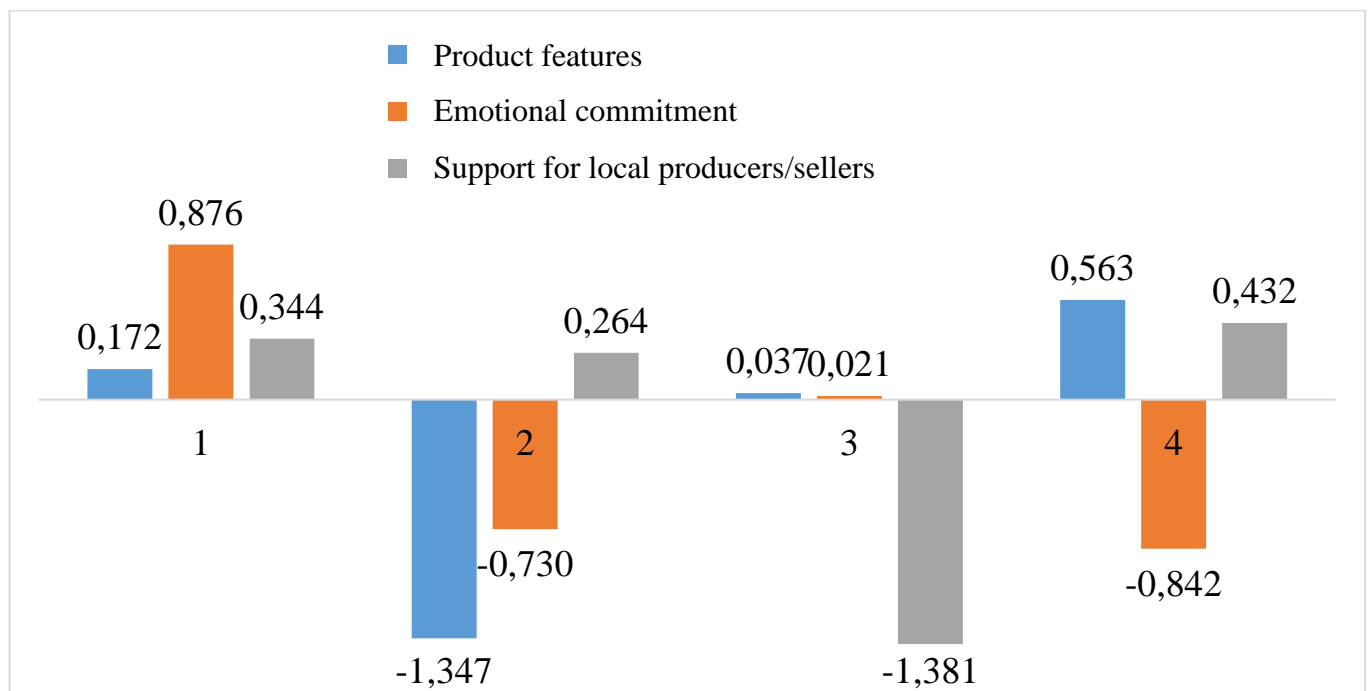
#### 4 5. Results of the exploratory factor analysis

Statements	Factors		
	External and internal product features	Purchase benefits from emotional commitment	Support for local producers and traders
I buy local products because they do not contain preservatives.	0.760		
I buy local products because they do not contain chemicals.	0.718		
I buy local products because they are healthy.	0.686		
I buy local products because they are environmentally friendly.	0.639		
I buy local products because they look good.	0.567		
I buy local products because they have a longer shelf life.	0.557		
I buy local products because I can buy as much as I need.	0.514		
I buy local products because they make me nostalgic.		0.867	
I buy local products because they bring back memories of the old days.		0.819	
I buy local products because it's fun for me.		0.777	

I buy local products because I would feel guilty if I didn't.		0.659	
I buy local products because they are ethical.		0.554	
I buy local products because I support local sellers (traders).			0.915
I buy local products because I support local producers.			0.817

Source: Author's development, 2020 Notes: Extraction Method: Maximum Likelihood. Extraction Method: Varimax with Kaiser Normalization. KMO MSA=0,890, Total variance=65,383%

The next step in the research was to analyse the clusters along each dimension (factor) using ANOVA (**Figure 1.**). The values illustrate the distance from the mean for each factor by cluster. The significance level is  $p < 0.001$  in all cases.



### 11. Presentation of each cluster by factor differences

Source: Author's development, 2020 Methodology: ANOVA test, Sig:  $p < 0,001$

The first of these factors, the significance of product characteristics, appears in all segments except the second cluster but is most pronounced in the fourth cluster. Emotional commitment is only essential for the first cluster, while support for local producers and traders is essential for the first and fourth clusters. The first cluster is the most ethnocentric

group. Compared to the average, perceived content and the environmental friendliness of the product are more important to them, but nostalgia and emotional impact are also vital (*Emotional respondents*). The second segment is dominated by support for the local economy, with less identification with the other values and even more rejection of them than the average (*Local Patriots*). The third group is considered the most passive, with no significant positive commitment to any factor compared to the average (*Passive Respondents*). The members of the fourth cluster shop mainly for the positive attributes of local food and supporting the local community. This group is closest to health and sustainability (*Conscious respondents*).

### 3.3. Reasons for refusing to buy local products

We also looked at the criteria for refusing to purchase local products.

In line with the research conducted by MEGICKS et al. (2012), we analysed the reasons for refusing local products among non-shoppers (97 respondents, 19.4%) (**Table 6**). The main reasons for rejection were perceived extra time and energy, excessive travel, difficulty of availability and inconvenience of shopping. High prices ranked only sixth among the reasons for not buying. The mode is 1 in all cases, so the table also reflects the fact that all mean values are low, i.e. the majority did not consider these factors to be a significant barrier, i.e., the refusal to buy local products was in most cases not caused by partial factors but by a fundamental aversion or disinterest.

#### 56.: Reasons for not choosing local products among the refusers

(N=106 (N=106))

Attitude statements	Statistical indicator				
	Average	Median	Mode	Standard deviation	Skew
I do not buy local products because they are too time-consuming to buy.	2.75	3.00	1	1.792	0.047
I do not buy local products because it takes too much extra energy.	2.64	2.00	1	1.809	0.134
I do not buy local products because I must travel too far to get them.	2.62	3.00	1	1.704	0.107
I do not buy local products because they are challenging to get.	2.60	3.00	1	1.766	0.119
I do not buy local products because shopping is inconvenient.	2.54	2.00	1	1.714	0.199

I do not buy local products because they are too expensive.	2.50	3.00	1	1.725	0.196
I do not buy local products because they are not well advertised.	2.43	2.00	1	1.753	0.361
I do not buy local products because the products purchased in traditional shops are typically better.	2.13	2.00	1	1.481	0.645
I do not buy local products because they don't have informative labels and labelling.	2.12	1.00	1	1.587	0.705
I do not buy local products because the choice is limited.	2.10	2.00	1	1.487	0.620
I do not buy local products because the price is not always clear on them (e.g. the barcode is missing).	2.07	1.00	1	1.602	0.771

Source: Author's development, 2020 N=106

### 3.4. Analysis of the CETSCALE model

In the following, we analysed the claims of Shimp and Sharma's (1987) model and explored them further using factor and cluster analyses on our 2021 sample.

Following the descriptive statistics, we examined whether the statements were suitable for constructing the dimensions and whether the reliability indicators confirmed this (Cronbach's Alpha=0.962; Kaiser-Meyer-Olkin=0.939; Bartlett's test:  $p < 0.001$ ). As shown in **Table 7**, two factors were isolated, as in previous research. Five statements had to be excluded from further analysis because they appeared with almost the same factor weight in both dimensions. Merely factor weights above 0.68 remained.

As can be seen, slightly more nationalistic or, as it is called in the literature, more protectionist and conservative attitudes were evident here (SPILLAN and HARCAR, 2013; SZAKÁLY et al., 2016). At the same time, the second combined more supportive, patriotic values (T. NAGY-PETŐ et al., 2023).

#### 67: Demonstration of factor analysis along the CETSCALE statements

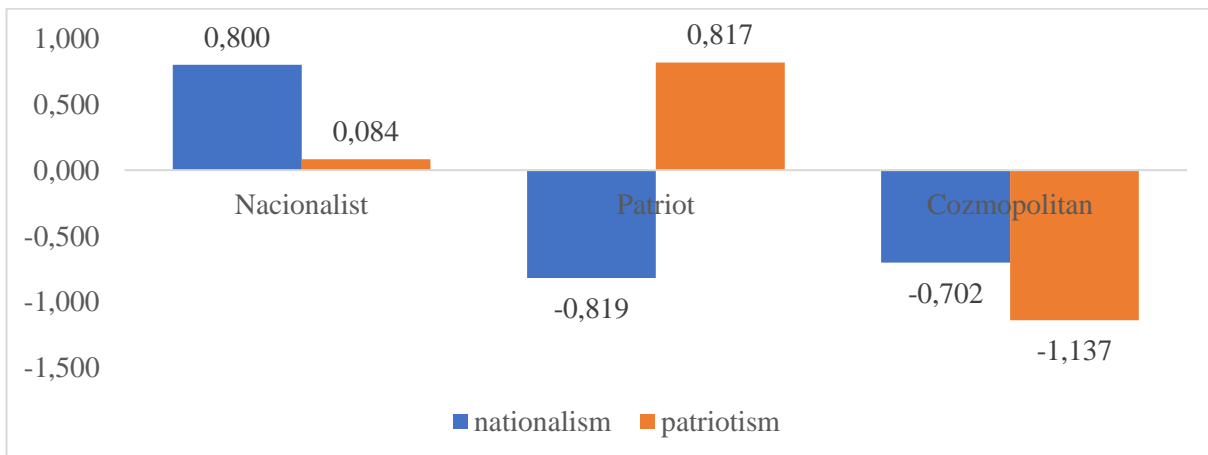
Statements	Factors	
	Nationalism	Patriotism
All import activity should be discouraged.	0.861	
Foreigners should not be allowed to place their products on the Hungarian market.	0.846	
Hungarian consumers who buy foreign products are responsible for their Hungarian compatriots losing their jobs.	0.798	

Foreign products should be taxed heavily to reduce their inflow into our country.	0.730	
An authentic Hungarian only buys Hungarian products.	0.729	
Buying foreign products is not a patriotic act.	0.686	
Buy Hungarian products! Protect Hungarian workplaces!		0.807
We should only import products that are not available in our country.		0.762
Hungarian people should always buy domestically produced products instead of those from abroad.		0.728
Unless absolutely necessary, we should buy a few foreign products.		0.725
It's always better to buy Hungarian products.		0.702
I prefer Hungarian products above all.		0.681

Source: Author's development, 2022 N=1000; Notes: Methodology: Maximum Likelihood; Varimax; KMO =0,939; Cronbach Alfa=0,962; Cumulative variance=72,99%; Sig:  $p<0,001$

After the factor analysis, we first analysed the dendrogram of Ward's hierarchical cluster analysis along the generated dimensions, using a multi-dimensional K-means procedure to determine which was the most appropriate and reliable classification option in terms of distribution and significance (T. NAGY-PETŐ et al., 2022).

Based on their deviation from the mean, the clusters were as follows:



## 2 2.: Cluster evolution by deviation from the mean

Source: T. NAGY-PETŐ et al., 2023a). N=1000; Notes: Methodology: K-means cluster analysis; ANOVA:  $p<0,001$

To better understand the clusters, we examined the variance of the clusters' opinions (shown in **Figure 2.**) from the mean, and we looked at the attitudes and characteristics of the clusters along each of the demographic and perceived awareness background variables. For the demographic background variables, significant correlations were not always found. For some factors, where the number of items was minimal, individual variables were aggregated by type (e.g. marital status, legal status), but these did not help to establish significant relationships. In the following, we present only the clusters for significant relationships are presented.

On the basis of descriptive statistics, deviations from the mean and cross-tabulation analyses according to the demographic background, the following can be concluded.

### **Cluster 1.: *Extremists, Nationalists***

This cluster is the largest, accounting for almost half of the sample (48.9%). Support for more extreme nationalist values is higher here than the average, while more consolidated patriotic values are only slightly higher than the average for the sample as a whole. It can be noted that the largest share (60.7%) of those with up to 8 years of primary education is represented here. In terms of income, it is rather typical that more than 50% of respondents who consider their financial situation to be medium or worse are classified here. Another interesting correlation is that as the size of the place of residence increases, the proportion of people listed here decreases, so residents of small settlements are more likely to be included. In contrast, residents of capital cities are the least likely to participate (T. NAGY-PETŐ et al., 2023). In addition, when looking at perceived environmental awareness, those who consider themselves as only moderately aware of the environment are more likely to be found here ( $p < 0.05$ ).

### **Cluster 2.: Patriots**

The second group made up 27.7% of the sample. Regarding values, this group can be described as patriots who fundamentally reject extremist, exclusionary ideas. This group tends to be dominated by graduates, with the lowest proportion of people with vocational qualifications. This group includes those who tend to do better than those who tend to do worse. (T. NAGY-PETŐ et al., 2023). In terms of regions, the inhabitants of northern

Hungary and the northern and southern Great Plain are the most numerous. They also tend to be more aware of health and environmental issues in their daily lives than the other two groups ( $p < 0.05$ ).

### **Cluster 3.: Cosmopolitans**

In the third group, which can be seen as a collection of *Cosmopolitan* respondents (23.4% of the sample), neither the nationalist nor the patriotic factor is positively represented. In both cases, attitudes towards the value groups are very negative compared to the average. Regarding the background variables, the share of those having attained the lowest level of education is too low. In addition, it is significant that members of the group considered to be in a high financial position are most likely to belong to this group. Concerning the place of residence, however, the inhabitants of smaller settlements are the least likely to belong to this segment (T. NAGY-PETŐ et al., 2022). (T. NAGY-PETŐ et al., 2023a). Regarding their region of origin, Western Transdanubians are overrepresented, and the Central Hungarian segment is also predominant. As far as their health consciousness is concerned, their perceived self-consciousness seems to be worse than that of the other two groups. ( $p < 0.05$ ).

In the following, we looked at perceptions of specific local foods along the clusters. We used ANOVA and Tukey's post-hoc test. In order to obtain appropriately validated results for each variable, variables with skewness and kurtosis below -1 and above +1 were excluded. Two statements are not included in the table below. The peculiarity of the following results is that, although it was assumed that the more extreme consumers with nationalist sentiments would rate local food significantly higher than the other groups, this was not the case in all cases. The Patriot group had the highest average score. In other words, Patriots tended to value local over foreign products more than Nationalists, who were considered to have more extreme nationalist sentiments. The members of the Nationalist cluster were more likely to ask about their place of origin than members of the other two groups. In all cases, Cosmopolitans were much less likely to agree with the higher value placed on local products.

#### **4. NEW AND NOVEL FINDINGS OF THE SUMMARY THESIS**

1. Comparing consumer knowledge of local products before and after the coronavirus epidemic is a new finding. As we can see in the 2021 survey, consumer expectations of local products have changed. Higher expectations have emerged. Local food has become increasingly important for Hungarian consumers, and they have become more aware of the characteristics that products must meet in order to be called local.
2. The comparison of the CETSCALE groups with local product attributes and their results can be considered as another novelty because although the CETSCALE groups have been researched several times both internationally and domestically, these groups' attitudes to local products have not been compared before. A unique result worth highlighting is that Patriots consider local products to be of much higher quality than Nationalists.
3. I consider the survey of consumer attitudes on a Hungarian sample based on the model of Megicks et al. (2012) as a novel result, as this model has not been tested on a Hungarian sample before. However, it is a useful tool to better understand the emotional charge behind consumer decisions and the support for the local economy.
4. Another novel finding is the survey and results on the non-purchase of local produce and attitudes towards farmers' markets. In this context, it was tentatively assumed that price or convenience would be a factor influencing non-purchase, but it has turned out that neither of these factors has a significant impact on consumers' purchasing attitudes, i.e. we can call it a lack of interest in local products.
5. Previous studies have already shown that the role of supermarkets with a production section has increased after the COVID. About two-thirds of the respondents said that they buy products here. These issues have not been studied in such detail for about 10 years, and it is a novelty to find that two-thirds of respondents use farmers' markets and markets extended with a farmers' section on a monthly basis. However, proximity is an important factor and fruit and vegetables remain the most popular products.

## 5. CONCLUSIONS

The next chapter, after a brief introduction, presents the validation of the hypotheses formulated at the beginning of the research and the related proposals. It is followed by a separate chapter in which the new and novel findings are presented with brief explanations, and then what I consider to be the limitations of the research.

Demand for local produce has increased globally over the last decade, and it has been exacerbated in most countries by the coronavirus epidemic (CAVALLO et al., 2020; FEI et al., 2020; GRANVIK et al., 2017; FoodNavigator, 2018; IRI, 2018; JENSEN et al., 2019; WUNSCH, 2020; SRD, 2020). Among consumer expectations, it is important to highlight quality, safety, trust, ethicality and (local) sustainability as keywords in consumers' decision-making on local products (CONNER et al., 2010; MEGICKS et al., 2012; CARRIGEN – PLESMACKER, 2009; GIAMPIETRI et al., 2018). The segments most committed to local products, both in terms of awareness and purchase of local products, are middle-aged, affluent people (T. NAGY-PETŐ, 2022).

### Justification of hypotheses

*Hypothesis 1a: Consumers' minds were also dominated by factors defined by the previous law before the Crown virus outbreak, i.e. the use of the traditional process or Hungarian property and labour.*

*Hypothesis 1b: Knowledge about the origin of local products was incomplete and inaccurate before the coronavirus outbreak.*

In conclusion, both hypotheses 1a and 1b are confirmed. I suggest that the local products campaign launched under the COVID should be continued, thus reinforcing awareness and commitment to local products.

*Hypothesis 2a: Buyers of local products also consider ATL-type (Above The Line) information when seeking information about local products, but the primary source of information is the immediate social environment.*

*Hypothesis 2b: In local communities, the demographic characteristics of the group that spends most on local products are similar to those of the conscious consumer group.*

In conclusion, hypothesis 2a is only partially confirmed, since ATL tools appear in a very low proportion of the information sources used, but hypothesis 2b is confirmed since the characteristics of the consumer segment identified in the literature also appear in relation to local products. It is therefore advisable for local producers and traders to pay more attention to their communication style, both in person and on other platforms, as it is the most effective way to attract both repeat and new customers.

*Hypothesis 3a: Farmers' markets are clearly the most popular among short food supply chains.*

*Hypothesis 3b: Consumers are most likely to buy fruit, vegetables and eggs regularly at farmers' markets.*

In conclusion, the hypotheses concerning producer markets are confirmed. It is therefore important to continue to select the most convenient locations for the development of markets, as it has been shown that the willingness of shoppers to be mobile is low. In addition, the three most popular product categories should have priority and affordable retail space.

*H4: There have been major changes in their local product awareness after the coronavirus outbreak.*

Overall, hypothesis 4 is acceptable, as it shows that consumers' knowledge of local products is more accurate and that their expectations of these products have changed significantly. The work of the NAK (National Chamber of Agricultural Economics) and the Agricultural Marketing Committee is likely to promote domestic products, but the further, primarily communication-based promotion of local products is justified. In addition, it is worth drawing the attention of local communities to the useful presence of the Local Product Handbook, as they can implement a number of good practices and methods to help them revitalise their own community economy in this way. In addition, the literature suggests that close links with tourism institutions can also facilitate profit growth and development.

*Hypothesis 5a: Regarding local products, Hungarians agree mainly with rational reasons, while individual emotions are the least important factor in purchasing decisions.*

*Hypothesis 5b: According to the model of Megicks et al. (2012), different groups can be formed along each dimension.*

*Hypothesis 5.c: The local food preference model of Megicks et al. (2012) yields the same results in a Hungarian sample today.*

*Hypothesis 5.d: The main reasons for non-purchase are the perceived high price and the assumption that the expected effort is too high.*

Based on the above, hypothesis 5a is confirmed, i.e. the proportion of people who buy local products for nostalgia and pleasure is negligible, but rational arguments such as reliability or support for the local economy are much more important. Increased attention to these arguments in marketing communications may therefore be a suggestion.

As can be seen, hypothesis 5b was confirmed, since - although the results of the original model could not be reproduced, thus hypothesis 5c was falsified - four well-differentiated groups of local products emerged. Furthermore, hypothesis 5d could not be confirmed either, as none of the factors is relevant for the passivity of non-local consumers. In the case of non-consumers, therefore, it is probably unnecessary to use excessive force to motivate them, but it would be worthwhile to monitor the attitudes and preferences of motivated groups regularly and to disseminate the results to local businesses and decision-makers so that appropriate strategies can be developed at the local level.

*Hypothesis 6a: The CETSCALE model will continue to produce distinct groups that are consistent with the literature.*

*Hypothesis 6b: Nationalist and patriotic groups will be better informed about local product rules than cosmopolitans.*

In conclusion, hypothesis 6a has been confirmed, as different groups continue to emerge along the CETSCALE scale, confirming the relevance of the model over almost 40 years. It is therefore worth using this model to measure ethnocentrism in the future. However, the suggestion (H 6b) that more committed groups would be better informed about local products than the Cosmopolitan group was rejected. The increased bias of the Nationalist group towards local products was also rejected, as the Patriot segment almost always scored higher than them on average. On this basis, it is recommended that a less nationalistic and

more patriotic style of communication be strengthened in order to retain this committed group for local communities and producers of local and regional products.

Overall, individual labels can help to promote local products, but their creation alone is not enough. Adequate quality assurance, certification of food safety, better quality and, increasingly, environmentally friendly production and animal welfare standards are necessary to build trust and raise awareness of local products. They contribute to the creation of a positive image, trust and a well-communicated image (SZAKÁLY et al., 2010; GROHSEBNER, 2014).

Further analysis using one or other of the models or the basic knowledge questions could provide insights into how consumer attitudes have changed in light of economic considerations compared to the 2021 measurements.

## 6. LIST OF THESIS-RELATED PUBLICATIONS



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Subject: PhD Publication List

Candidate: Dorka T. Nagy-Pető  
Doctoral School: Doctoral School of Management and Business  
MTMT ID: 10073244

### List of publications related to the dissertation

#### Articles, studies (7)

1. **Nagy-Pető, D. T.**, Szakály, Z., Kiss, V. Á.: A helyi termékekkel kapcsolatos fogyasztói elvárások összehasonlító vizsgálata.  
*Marketing & Menedzsment*. 57 (1), 49-57, 2023. ISSN: 1219-0349.  
DOI: <http://dx.doi.org/10.15170/MM.2023.57.01.05>
2. **Nagy-Pető, D. T.**, Kovács, B., Kiss, M., Szakály, Z., Kiss, V. Á.: Consumer segmentation based on commitment to local products in Hungary.  
*Studies in Agricultural Economics*. 125 (3), 143-153, 2023. ISSN: 1418-2106.  
DOI: <https://doi.org/10.7896/j.2506>  
IF: 0.9
3. **Nagy-Pető, D. T.**, Szakály, Z., Kiss, V. Á.: Fogyasztói asszociációk és vásárlási szokások a rövid ellátási láncok kapcsán.  
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DOI: [http://dx.doi.org/10.53079/GAZDALKODAS.67.4.t.pp\\_315-324](http://dx.doi.org/10.53079/GAZDALKODAS.67.4.t.pp_315-324)
4. **Nagy-Pető, D. T.**, Szakály, Z., Kiss, V. Á.: Az etnocentrikus magatartás vizsgálata a cetscale modell alkalmazásával.  
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6. **Nagy-Pető, D. T.**, Fehér, A., Szakály, Z.: Az egészségvédő élelmiszerekkel kapcsolatos fogyasztói attitűdők vizsgálata.  
*Táplálkozásmarketing*. 7 (1), 39-55, 2020. ISSN: 2064-8839.  
DOI: <http://dx.doi.org/10.20494/TM/7/1/3>





7. **Nagy-Pető, D. T.**: Az egészségvédő hatás szerepe a lakosság étel-miszer-vásárlásában = The role of health protective effect in the food purchase of the population.  
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DOI: <http://dx.doi.org/10.21791/IJEMS.2019.3.17>.

### List of other publications

#### Articles, studies (3)

8. Szakály, Z., Kovács, B., Szakály, M., **Nagy-Pető, D. T.**, Popovics, P. A., Kiss, M.: Consumer acceptance of genetic-based personalized nutrition in Hungary.  
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DOI: <http://dx.doi.org/10.1186/s12263-021-00683-7>  
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10. Barna, F. K., Szakály, Z., **Nagy-Pető, D. T.**, Bauerné Gáthy, A.: Fenntartható étel-miszer-fogyasztás: Egészség- és környezettudatosak-e az alternatív étrendet követők?  
*Gazdálkodás*. 64 (3), 189-201, 2020. ISSN: 0046-5518.  
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**Total IF of journals (all publications): 11,04**

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